

## **REMARKS**

In the Office Action of February 1, 2007 claims 1-5, 8-15, 18-19, and 26-30 were rejected under 35 U.S.C. §103 (a) as being obvious over EP 0066463 in view of U.S. Patent No. 6,025,050 (Srinivasan) and U.S. Patent No. 5,429,856 (Currie). Claims 1-64 were rejected under 35 U.S.C. §103(a) as being unpatentable over EP 0066463 in view of U.S. Patent No. 6,025,050 (Srinivasan) and U.S. Patent No. 5,429,856 (Currie), and EP 1212974.

Claims 1-64 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over:

- claims 1-50 of co-pending Application No. 10/745,327 in view of EP 0066463, U.S. Patent No. 6,025,050 (Srinivasan) and U.S. Patent No. 5,429,856 (Currie);
- claims 1-91 of co-pending Application No. 10/733,169 in view of EP 0066463, U.S. Patent No. 6,025,050 (Srinivasan) and U.S. Patent No. 5,429,856 (Currie);
- claims 1-131 of co-pending Application No. 10/321,831 in view of EP 0066463, U.S. Patent No. 6,025,050 (Srinivasan) and U.S. Patent No. 5,429,856 (Currie);
- claims 1-220 of co-pending Application No. 10/322,277 in view of EP 0066463, U.S. Patent No. 6,025,050 (Srinivasan) and U.S. Patent No. 5,429,856 (Currie); and
- claims 1-132 of co-pending Application No. 10/036,736 in view of EP 0066463, U.S. Patent No. 6,025,050 (Srinivasan) and U.S. Patent No. 5,429,856 (Currie).

Applicants respectfully request that the provisional double-patenting rejections continue to be held in abeyance until the final scope of the claims is determined.

In light of the remarks below, Applicants respectfully request reconsideration and withdrawal of the §103 obviousness rejections.

As understood by Applicants, in the February 1, 2007 Office Action, the presently-pending claims 1-64 are rejected as obvious based on a modification of EP

'463, namely the use of hot pin aperturing to form the perforations discussed in EP '463. The Office Action states that the modification would be obvious to one of ordinary skill in the art because: (1) "it is conventional to form apertured nonwoven fabrics by aperturing using hot pin perforation" based on Srinivasan; and (2) "it is particularly advantageous to employ hot pins to form perforations in cleaning sheets because the hot pins produce perforations which enhance the scrubbing ability of the sheet" based on Currie.

Applicants, however, respectfully disagree with the reasoning set forth in the Office Action, and believe that it would not be obvious to one of ordinary skill in the art to modify EP '463 through the use of hot pin aperturing to form the perforations through the absorbent material.

First, it should be noted that both Currie and Srinivasan relate to aperturing thermoplastic materials or composites that include a thermoplastic component, such as the plastic sheets discussed in Srinivasan and the shot-laden abrasive layer discussed in Currie. Secondly, the advantages of Currie that are of present interest (i.e. improved scrubbing ability) are not derived solely from the presence of perforations. Instead, as stated in Currie, the "elevation of the temperature of the pin aperturing apparatus serves to lock the apertured surface into the three-dimensional shape formed then the heated pins penetrate through both the course, shot-laden layer 10 and its supporting carrier layer 14 into the apertured roller. Accordingly, the surface area of the apertured layers is increased." (Currie, col. 8, ll.16-25). This shape can be obtained since the abrasive layer comprises polymeric material, namely, a shot-laden layer. Thus, the enhanced scrubbing ability is derived not simply from perforations, but from the three-dimensional effect the aperturing process imparts on the shot-laden material. Furthermore, the aperturing operation occurs as part of forming a precursor abrasive layer that joined to an abrasive layer in a later operation. See, e.g. Currie at col. 6, ll. 13-28.

Applicants believe the use of hot pins to aperture EP '463 would not be obvious over the cited references since the Office Action provides no reasoning as to why it would be obvious to use hot-pin aperturing to form perforations in the absorbent material of EP '463.

First, in Currie, the aperturing operation does not involve the absorbent layer, but rather relates to forming an abrasive layer from polymeric material. There is no

indication of any advantage in using hot pins to aperture materials, such as the paper layer of EP '463, in the absence of polymeric material. If an abrasive layer were formed according to Currie for use in EP '463, the question remains as to why one of ordinary skill in the art would hot-pin aperture the absorbent layer since the alleged enhancements to the cleaning ability are derived from shaping the abrasive layer.

Secondly, as noted above, the scrubbing advantages noted in Currie are due to the three-dimensional shape of the abrasive layer, not merely due to forming of perforations generally by using hot pin aperturing. It is not clear that one of ordinary skill in the art would perceive a reasonable chance of success in applying the hot-pin bonding/aperturing teachings of Currie/Srinivasan for *thermoplastic materials* to a perforating operation for *paper layers* of EP '463.

For instance, hot pin aperturing of EP '463 would only be advantageous to the extent polyethylene film layer 5 were involved since, as noted above, the cited references teach the use of hot pins in aperturing polymeric materials. However, one of ordinary skill in the art would not pursue this course because to do so would render EP '463 nonfunctional for its intended purpose. If the absorbent layers of EP '463 (indicated at 4 in Fig. 2) were to be bonded together in the allegedly-obvious manner, the compartments 8 of active material 9 would be sealed shut by the melting of polyethylene film 5 in a manner similar to the formation of seals 7. EP '463 expressly teaches away from any operation that blocks the path for release of active material (see page 12, where "the danger of blockage" is warned against in the context of applying adhesive after forming perforations). Therefore, it would not be obvious to use hot pins in forming the apertures of EP '463, since one of ordinary skill in the art would not perceive an advantage in hot pin aperturing material that lacks a thermoplastic component.

Although the arguments above are generally applicable, the chances of success of using hot pin aperturing in an absorbent structure become even less reasonable when viewed in the context of multi-ply structures. For instance, specific multi-ply structures are found in claim 22 (absorbent structure contains at least 8 fibrous webs), claim 23 (absorbent structure contains at least 12 fibrous webs), claim 33 (liquid absorbent structure includes at least 8 layers of webs), claim 52 (liquid absorbent

structure includes at least 8 layers of webs), claim 56 (liquid absorbent structure contains at least 12 layers), and claim 57 (liquid absorbent structure contains at least 18 layers). The February 2, 2007 Office Action alleges it would be obvious to select the claimed number of plies through the process of routine experimentation. Applicants do not acquiesce to the rejection on those grounds. However, even assuming for the sake of argument that the number of plies were obvious, the rejection of such claims as obvious should be withdrawn since it would not be obvious to apply the hot-pin aperturing techniques to cellulosic structures of such thickness.

Alternatively, even assuming for the sake of argument that it would be obvious to use hot-pin aperturing, then it would not be obvious to select and incorporate the claimed number of plies into EP '463 through routine experimentation since (in addition to the reasons already of record), the addition of plies could impair the success of the hot pin aperturing process in forming a suitably-shaped abrasive structure. Namely, even if EP '463 were to be hot-pin apertured, one of ordinary skill would not perceive a benefit in adding additional plies since the additional non-thermoplastic material would reduce or eliminate the ability to properly form the three-dimensional structures that enhance scrubbing ability.

The February 2, 2007 Office Action rejects the claims directed to the depth and distribution of perforations, as well as the number of cellulosic layers, on the grounds that they could be arrived at through "routine experimentation. As set forth previously in the record, Applicants do not believe that the depths of perforations, distributions of perforations, and numbers of cellulosic sheets would be arrived at through routine experimentation. However, in addition to the reasons already of record, the rejections should be withdrawn since any such experimentation would be far from routine in light of the newly-cited combination of EP '463 with hot-pin aperturing techniques of Srinivasan in order to achieve scrubbing enhancements of Currie. For instance, the Office Action states that the claimed depths/distributions of perforations would be arrived at through routine experimentation guided by EP '463 to obtain desired release of active components. However, the EP '463 guidance would be reduced or inapplicable if hot pin aperturing were used to form the perforations due to the number

of variables that would be introduced such as the melting of internal polyethylene sheet  
5.

Since modifying EP '463 based on hot pin aperturing as taught by Srinsivian and motivated by Currie would not be obvious, Applicants respectfully request withdrawal of the pending rejections.

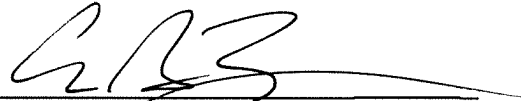
Applicants submit that all pending claims are patentable over the cited references. Favorable action thereon is respectfully requested.

The Examiner is encouraged to contact the undersigned at her convenience to resolve any remaining issues.

Please charge any additional fees required by this Amendment to Deposit Account No. 04-1403.

Respectfully requested,

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